

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/14/2009 has been entered.

2. Applicant's amendment to claims 36-41 has overcome the examiner rejections under 35 U.S.C. 101 and 35 U.S.C. 112, 1st paragraph.

Response to Arguments

1. Applicant's arguments with respect to the independent claims and the Matsumura et al. reference have been considered but are moot in view of the new ground(s) of rejection.

As discussed in the interview between the examiner and Applicant's representative, Dominic Tuccio, on 2/3/2010, the amendment to claim 1 requiring that the moving speed of the video input unit be used to estimate the position of an object in an image effectively distinguishes over the Matsumura et al. reference. Thus, a new grounds of rejection is required.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 3-6 and 30-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura et al. (US # 6,222,583) in view of Seo (US # 6,014,608).

As to claim 3, Matsumura et al. teaches a video image object recognizing apparatus (Figure 1) comprising: estimating means for estimating a position of an object (Figure 10, CG image) in a captured video image from positional information which is information of the position of an object (Figure 4, “Position Information”) and image capturing information including information for determining an area where an image will be captured (Figure 4, “Camera Angle” and “Focal Distance”), and recognition means for recognizing whether said object is present or not using a difference between visual feature quantities of a partial video image of said captured video image and said object and a difference between the position of said partial video image and said estimated position (Col. 13, Lines 32-42). The claim differs from Matsumura et al. in that it further requires that the estimating means estimates the position of an

object in a captured video image from moving speed information of a video input unit providing the captured video image.

In the same field of endeavor, Seo discloses a navigation apparatus (Figure 1) employed in a vehicle (Col. 3, Lines 51-55). The apparatus calculates a position of the vehicle and uses this position information to access a map information about the vehicle's current position. When calculating the current position, the system uses GPS information as well as speed information about the vehicle (Col. 3, Line 66 – Col. 4, Line 35; *{Matsumura et al. discloses in the Conventional Art section of the disclosure a navigational system similar to the endeavor of the main invention which is utilized in a vehicle. Matsumura et al. does not explicitly disclose that the main invention is implemented in a vehicle. However, navigation systems are most commonly used in vehicles. With the addition of Seo, Matsumura's invention is essentially used in the vehicle of Seo, where the speed of the vehicle; and hence, the camera of Matsumura et al. is used to estimate the position.}*). In light of the teaching of Seo, it would have been obvious to one of ordinary skill in the art utilize the speed information of the camera (on the vehicle) in Matsumura et al. in order to access the map information, because an artisan of ordinary skill in the art would recognize that this would allow the system of Matsumura et al. to attain a position of a landmark or geographic site with a higher degree of accuracy.

As to claim 4, Matsumura et al., as modified by Seo, teaches a video image object recognizing apparatus according to claim 3, wherein a probability distribution of an error of said image capturing information is reflected in a probability distribution that an object is present in recognizing whether said object is present or not (*The probability distribution of an error in the image capturing information is interpreted to be 0% - 100%. Also, the probability distribution*

that an object is present is 0% - 100%. Thus, the probability distribution of the error is reflected (i.e. the same as) in the probability distribution that an object is present.).

As to claim **5**, Matsumura et al., as modified by Seo, teaches a video image object recognizing apparatus according to claim 4, wherein the probability distribution that an object is present is employed as the difference between the position of said partial video image and said estimated position (*The examiner submits that the difference between the position of said partial video image and said estimated position would inherently involve a probability distribution.*).

As to claim **6**, Matsumura et al., as modified by Seo, teaches a video image object recognizing apparatus according to claim 5, wherein a normal distribution of a variance of an error of said image capturing information is employed as said probability distribution (*Similar to claim 5, a probability distribution would inherently involve a normal distribution of a variance of the error.*).

As to claims **30-35**, claims 30-35 are method claims corresponding to the apparatus claims 1-5, respectively. Therefore, claims 30-35 are analyzed and rejected as previously discussed with respect to claims 1-6, respectively.

As to claims **36-41**, in light of the passages of Matsumura et al. discussing computer generation (“CG”) and the cited passages of Matsumura et al. discussed in claims 1-6, claims 36-41 are analyzed and rejected as previously discussed in claims 1-6, respectively.

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. DANIELS whose telephone number is (571)272-7362. The examiner can normally be reached on 8:00 A.M. - 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sinh Tran/
Supervisory Patent Examiner, Art Unit
2622

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